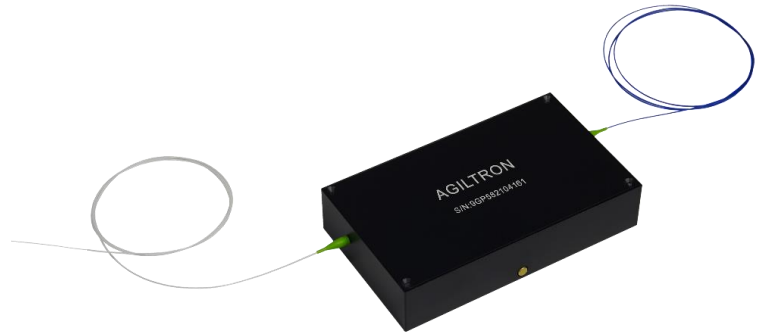


Precision High Speed Optical Attenuator

Product Description

The Precision High Speed Optical Attenuator maintains a constant attenuation, regardless of the environment fluctuations. The attenuation level can be varied at a fast speed. This is achieved by integrating two tap detectors at the fiber input and output of a NanoSpeed™ attenuator, and controlling the ratio using a feedback close-loop circuit. The attenuation is proportional to the 0-5V control signal which is input via a SMA connector. The module can also compensate slow polarization dependent loss changes and fast optical power surges, since the tap detectors will sense these changes. The non-mechanical device has passed the most stringent mil-spec and space flight qualifications, and is designed for over 20 years continuous operation. The module comes with a wall-plug 12V power supply.



Performance Specifications

PNSA		Min	Typical	Max	Unit
Central Wavelength		760		2000	nm
Insertion Loss ^[1]	1260 -1650nm		1.4	2.4	dB
	960 - 1100nm		1.6	2.6	dB
	760 - 960nm		1.8	2.8	dB
Dynamic Range	Single Stage	18	20	25	dB
	Dual Stage	30		35	dB
Return Loss		45	50		dB
Response Time				1	μS
Attenuation Adjustment Resolution			Continuous		dB
Polarization Extinction Ratio		20	24	32 ^[2]	dB
Operating Optical Power (CW)			0.5	10	W
Electrical Control Signal (SMA Connector)		0		5	V
Power Supply		11	12	13	V
Operating Temperature		-5		70	°C
Storage Temperature		-40		85	°C

[1]: Excluding connectors. The connector adds 0.3dB each. Including the power tapping for feedback control.
 [2]: High ER version need special order

Features

- No Moving Parts
- High Reliability
- High Speed
- Precision
- Up to 10W

Applications

- Laser Power Regulation
- Surge Power Prevention
- Power Balance
- Instrumentation

Operation Instruction

- Plug in the accompanied power supply.
- Apply 0-5V control signal through the SMA connector
- The module output should vary from maximum to minimum corresponding and proportionally to the 0 -5 V control signal.
- With a fixed control voltage, the module maintains a constant attenuation which is defined as Input Optical Power – Output Optical Power, independent of time and environment changes.

Dimension of Module (Unit: mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Ordering Information

Prefix	Input Power	Wavelength	Attenuation Range	Fiber Type	Fiber Cover	Fiber Length	Connector ^[1]
PNSA-	0.5W = 11 10W = 10 1W = 01 2W = 02 5W = 05	1060 = 1 2000 = 2 1310 = 3 1480 = 4 1550 = 5 1625 = 6 780 = 7 850 = 8 650 = E 550 = F 400 = G Special = 0	1-18 = 10 1-35 = 20 1-50 = 30 Special=0	SMF-28 = 1 HI1060 = 2 HI780 = 3 PM1550 = 5 PM850 = 8 PM980 = 9 SM2000 = 6 PM2000 = 7 Special = 0	900um tube = 3 Special = 0	0.25m = 1 0.5m = 2 1.0 m = 3 Special = 0	None = 1 FC/PC = 2 FC/APC = 3 SC/PC = 4 SC/APC = 5 ST/PC = 6 LC = 7 Special = 0

[1]: High power connector may be available per request, please contact sales.
Special Order

NOTE:

- PM1550 fiber works well for 1310nm